



B.E/B.Tech. (Full Time) DEGREE END SEMESTER EXAMINATIONS, APRIL/MAY 2011  
COMPUTER SCIENCE & ENGINEERING / INFORMATION TECHNOLOGY BRANCH  
FIFTH SEMESTER-(REGULATIONS 2008)

**IT9303- COMPUTER NETWORKS**

Time: 3 hours

Answer ALL Questions

Max Mark: 100

**Part-A (10 x 2= 20 Mark)**

1. List two advantage of having international standards for network protocols.
2. Why network software is organized as a series of layer?
3. What is the function of PLCP in WLAN?
4. At a transmission rate of 5 Mbps and a propagation speed of 200m/μsec, how many meters of cable is the 1-bit delay in a token ring interface equivalent to?
5. What is the function of time to live field in the Internet protocol header?
6. Give two applications for which connection-oriented service is appropriate.
7. State any four QoS parameter in the transport layer.
8. The maximum payload of TCP segment is 65515. why?
9. What is the difference between HTTP and HTTPS?
10. Comment : MIME

**Part-B (5 x 16= 80 Mark)**

- 11.a.i Explain with a neat sketch the function of the protocol in each layer of the OSI model and illustrate how communication is taking place between two end systems. (10)
  - ii. Discuss any two types of redundancy check with suitable example. (6)
  - 12.a.i Explain IEEE 802.11 architecture for wireless LAN. (8)
  - ii Explain the steps involved in successful transmission and reception of frames in Ethernet. (8)
- (OR)**
- 12.b.i Explain the features of the IEEE 802.5 token ring network (8)
  - ii Explain how to avoid looping problems in bridges. (8)

- 13.a.i Describe the two methods that are used to calculate the shortest path between two routers. (10)
- ii Explain the three functional procedures involved in Border Gateway Protocol (BGP) (6)

(OR)

- 13.b.i What is congestion? Explain how congestion control is achieved in load shedding and jitter control. (10)
- ii Compare IPV4 and IPV6 Header formats (6)

- 14.a.i Explain in detail the connection establishment in TCP and the process of connection termination. (16)

(OR)

- 14.b.i Draw the queuing system structure and explain the parameters used for single server queue. Derive the formula for M/G/1, M/M/1, M/D/1 single server queues. (12)
- ii An end system sends 50 packets per sec using use datagram protocol (UDP) over a full duplex 100Mbps Ethernet LAN connection. Each packet consists 1600 bytes of Ethernet frames payload data. What is the throughput when measured at UDP layer? (4)

- 15.a.i Explain the use of SMTP, POP3 and IMAP protocols for sending and receiving emails. (12)
- ii Write short note on FTP. (4)

(OR)

- 15.b.i Explain how configuration management, fault management and performance management is implemented in SNMP (8)
- ii Explain the features of DNS protocol and their implementation. (8)